

Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) An improved addressing method for updating electrophoretic displays with lower latency for use with interactive applications, A method of activating a portion of an electrophoretic display (10), the method comprising:
 - a) receiving drawing information [[(14)]] for at least one electrophoretic pixel in the electrophoretic display;
 - b) determining at least one drawing-mode waveform [[(68)]] for the at least one electrophoretic pixel in the electrophoretic display based on the received drawing information for the at least one electrophoretic pixel [[(14)]]; [[and]]
addressing the portion of the electrophoretic display (10) based on the drawing information (14) and the drawing-mode waveform (68).
 - c) applying the at least one drawing-mode waveform a predetermined number of times to complete an image update onto the at least one electrophoretic pixel in the electrophoretic display; and
prior to the completion of the image update for the at least one electrophoretic pixel at said step (c):
 - d) receiving drawing information for at least one additional electrophoretic pixel in the electrophoretic display,
 - e) determining at least one drawing-mode waveform for the at least one additional electrophoretic pixel in the electrophoretic display based on the received drawing information for the at least one additional electrophoretic pixel in the electrophoretic display;
 - f) applying the at least one drawing-mode waveform a predetermined number of times to complete an image update onto the at least one additional electrophoretic pixel in the electrophoretic display.

2. (Currently Amended) The method of claim 1, wherein the received drawing information [[(14)]] includes a keyboard input.
3. (Original) The method of claim 2, wherein the keyboard input is received from one of a keyboard or a keypad.
4. (Currently Amended) The method of claim 1, wherein the received drawing information [[(14)]] includes a drawing input.
5. (Original) The method of claim 4, wherein the drawing input is received from a touch screen.
6. (Currently Amended) The method of claim 1, wherein the received drawing information [[(14)]] includes a pointer input.
7. (Original) The method of claim 6, wherein the pointer input is received from one of a mouse or a cursor generator.
8. (Currently Amended) The method of claim 1, wherein determining the at least one drawing-mode waveform [[(68)]] includes:
selecting the drawing-mode waveform [[(68)]] from a set of stored driving waveforms [[(60)]] based on the drawing information [[(14)]] and a current optical state of at least one electrophoretic pixel [[(22)]] in the portion of the electrophoretic display [[(10)]].
9. (Currently Amended) The method of claim 1, wherein the drawing-mode waveform [[(68)]] is selected from a lookup table.
10. (Currently Amended) The method of claim 1, wherein addressing the portion of the electrophoretic display [[(10)]] includes:
applying the determined drawing-mode waveform [[(68)]] a predetermined number of times to write an image onto at least one electrophoretic pixel [[(22)]] in the electrophoretic display [[(10)]].
11. (Currently Amended) The method of claim 1, wherein addressing the portion of the electrophoretic display [[(10)]] includes:

writing pixel data onto at least one electrophoretic pixel [[(22)]] in the portion of the electrophoretic display [[(10)]].

12. (Currently Amended) The method of claim 1, further comprising:
storing pixel information based on the received drawing information [[(14)]]; and
addressing the portion of the electrophoretic display [[(10)]] based on the stored pixel information.
13. (Original) The method of claim 12, wherein the stored pixel information includes at least one of the group consisting of a pixel index, a pixel color level, a pixel coordinate, and a pixel counter.
14. (Currently Amended) The method of claim 12, further comprising:
updating the stored pixel information when the portion of the electrophoretic display [[(10)]] is addressed.
15. (Original) The method of claim 1, further comprising:
addressing a first set of pixels in the electrophoretic display based on the received drawing information and the drawing-mode waveform; and
addressing a second set of pixels in the electrophoretic display based on the received drawing information and a second drawing-mode waveform;
wherein the second drawing-mode waveform is applied to the second set of pixels prior to completion of an image update for the first set of pixels.
16. (Currently Amended) A system [[(12)]] for activating a portion of an electrophoretic display [[(10)]], the system comprising:
an electrophoretic pixel array [[(20)]] disposed on a backplane [[(32)]];
means for receiving drawing information for at least one electrophoretic pixel in the electrophoretic display;
means for determining at least one drawing-mode waveform for the at least one electrophoretic pixel in the electrophoretic display based on the received drawing information for the at least one electrophoretic pixel
means for applying the at least one drawing-mode waveform a predetermined number of times to complete an image update onto the at least one electrophoretic pixel in the electrophoretic display;
and

prior to the completion of the image update for the at least one electrophoretic pixel at said step (c);

means for receiving drawing information for at least one additional electrophoretic pixel in the electrophoretic display;

means for determining at least one drawing-mode waveform for the at least one additional electrophoretic pixel in the electrophoretic display based on the received drawing information for the at least one additional electrophoretic pixel in the electrophoretic display;

means for applying the at least one drawing-mode waveform a predetermined number of times to complete an image update onto the at least one additional electrophoretic pixel in the electrophoretic display

means for receiving drawing information (14);

means for determining at least one drawing mode waveform (68) based on the drawing information (14); and

means for addressing the portion of the electrophoretic display (10) based on the drawing information (14) and the drawing mode waveform (68).

17. (Currently Amended) The system of claim 16, further comprising:

means for storing pixel information based on the received drawing information [[(14)]]; and

means for addressing the portion of the electrophoretic display [[(10)]] based on the stored pixel information.

18. (Currently Amended) The system of claim 17, further comprising:

means for updating the stored pixel information when the portion of the electrophoretic display [[(10)]] is addressed.

19. (Currently Amended) An electrophoretic display [[(10)]], comprising:

an electrophoretic pixel array [[(20)]] disposed on a backplane [[(32)]]; and

a row driver [[(40)]] electrically connected to a set of rows [[(44)]] of the electrophoretic pixel array[[(20)]]; and

a column driver [[(50)]] electrically connected to a set of columns [[(54)]] of the electrophoretic pixel array [[(20)]]; and

a controller (30) electrically connected to the row driver (40) and the column driver (50);

wherein the controller [[(30)]] determines at least one drawing-mode waveform [[(68)]] based on drawing information [[(14)]]; and

wherein the controller [[(30)]] addresses a portion of the electrophoretic display [[(10)]] based on the drawing information (14) and the drawing-mode waveform (68) to write an image onto at least one electrophoretic pixel in the electrophoretic display [[(10)]].

20. (Currently Amended) The electrophoretic display [[(10)]] of claim 19, wherein the controller [[(30)]] receives drawing information [[(14)]] for the portion of the electrophoretic display [[(10)]].